



# Social Ties, Network Socioeconomic Diversity and Sporting Event Attendance

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## Abstract

Heterogeneous social networks are the source of valued life outcomes, and this heterogeneity is associated with different circumstances and personal attributes. This paper analyses the size and socioeconomic diversity of social networks of people who attend sporting events. The relationship between sports participation and social networks has been widely analysed. However, the role of attending sporting events in the creation of different forms of social capital, specifically networks' socioeconomic heterogeneity, remains unclear. A better understanding of this issue may help to clarify the social impact of sports participation. Drawing on a unique dataset collected through the administration of a questionnaire to a representative sample of the Spanish population and employing an ad hoc, class-based position generator, we show that attendance to sporting events is associated with social mixing and the creation of networks of people from different occupational classes. Indeed, the size of these effects increases with the frequency of attendance. These results suggest that attending sporting events is associated with bridging social capital and may foster social integration and life opportunities for those who are less advantaged.

## 1 Introduction

This paper analyses how attending live sporting events is related to the size and diversity of social networks. More specifically, it proposes that informal social contact that is usually produced when people attend or converse about sporting events may facilitate the kind of social mixing that boosts bridging social capital.

We start by examining the role of sports in the growth of social capital. In particular, the link between sports and social capital has attracted the attention of a growing body of research, as is well documented in Nicholson & Hoye (2008). Sports are a source of oppor-

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tunity for the development of both social networks and social trust; thus, they generate social capital at both the individual and community levels (Peachey et al., 2015; Putnam, 1995, 2000; Sherry et al., 2011). According to some authors, a key factor for both establishing new relationships and strengthening existing relationships is frequent participation in sports or frequent meetings in a sports environment (Ulseth, 2004; Becker & Häring, 2012). The more time one spends engaging in sports or sports organisations, the higher the probability of one coming into contact with others is, which might translate into stronger existing relationships or even life-long friendships.

However, the role that sports engagement plays in the creation of social capital remains unclear and underspecified. The existing literature does not study the extent to which the impact of active sports participation on individual social capital applies to attending sporting events. In particular, there is a lack of evidence about the quality and socioeconomic diversity of the social relations developed through sports spectatorship. More specifically, to the best of our knowledge, no studies relate sports spectatorship with social networks' extension and class diversity. If attendance to sporting events is related to social capital, then it is crucial to understand what kind of ties this form of engagement strengthens, i.e., interactions with people with either similar or different socioeconomic backgrounds. In fact, heterogeneous social networks are the source of valued life outcomes. Concerning expressive returns (for example, personal identity, recognition, or sense of belonging), the extension and diversity of social networks are associated with an increase in both the production and consumption of relational goods (Becchetti et al., 2008; Pena-López et al., 2017). Additionally, social network diversity favours the provision of instrumental resources (such as income, power, or social status), as the social capital literature has extensively discussed Lin (2001, 2008). Therefore, when attending sporting events is associated with social capital diversity, it may also contribute to these expressive and instrumental outcomes. This paper attempts to fill this gap to advance the understanding of the social impact of sports engagement.

There is a shortage of theoretical explanations about how informal recreational practices, such as attending sporting events, may generate bridging social capital (Warde et al., 2017). To fill this lack, the analytical framework of the present work is based on two competing approaches. From a Bourdieusian perspective, any form of sports engagement may be understood as a form of cultural consumption, which increases the amount of contact one has with other people within the same social class. If this is the case, then attendance would not increase social network diversity or bridging social capital.

In contrast, authors such as Chan & Goldthorpe (2007, 2010) have found evidence suggesting that the influence of social class in structuring the cultural consumption of individuals is not as pronounced as theories based on the Bourdieusian perspective suggest. Indeed, there are several mechanisms through which engagement in sports and, significantly, attending live events contribute to creating and strengthening social ties across members with diverse socioeconomic backgrounds. For example, sporting event attendance is one of the best contexts for the production of relational goods, mainly because of the specific nature of the personal interactions that entail attendance at some of these types of events. A shared leisure experience, such as going to the stadium for a sporting event or talking about sport, gives rise to or reinforces meaningful human ties as social interactions. In turn, these social interactions are the basis for specific relationships such as companionships, friendships, pride for a team or community, and social recognition. Therefore, attending sporting events

can be considered a non-instrumental social activity that can affect the structure of social networks. In any case, this approach assumes as a central proposition the role of sports as a source of class-independent social contacts.

To provide new empirical evidence about the link between attending live sporting events and the size and diversity of social networks, we studied the relationship between the frequency of attending sporting events and different dimensions of social networks, as measured by means of an ad hoc, class-based position generator. To this end, we collected data through the administration of a questionnaire to a representative sample of the Spanish population ( $n=3,000$ ) aged 18 years or older. The frequency of attendance to sporting events was measured directly by a survey question, where admitted responses included “at least one per month”, “at least once every three months”, “at least once every six months”, and “once per year or less/never”.

Spain provides a suitable national context-specific case study for both present and future cross-national comparison due to the prominent role that sports play in the Spanish social, national and cultural landscape. Many Spaniards consider themselves to be sports enthusiasts. According to data from the Sports Habits Survey (*Encuesta de Hábitos Deportivos 2015*), 81% of the Spanish population attends or accesses sporting events by audio-visual media. More specifically, 37.1% attend live sports events.

Our findings suggest that attendees to sporting events enjoy improved social networks in terms of the number of contacts and the range of diversity. Indeed, people who attend sporting events and have been classified as working class according to their occupation enjoy more high-class social ties than do other people from the same stratum. Additionally, we find a positive effect of frequency of attendance. In other words, the positive effect on network diversity disappears when the attendance frequency is low.

The rest of the paper is organised as follows. Section 2 discusses the analytical framework and the related literature. Section 3 introduces the data and the methods used in the empirical part of the paper. The results are presented in Sect. 4, and discussed in Sect. 5. Finally, Sect. 6 concludes the manuscript.

## 2 Analytical framework and related literature

From a theoretical point of view, we take as a starting point two approaches from which different predictions are derived.

### 2.1 Bourdieu's perspective: sports and social class

Bourdieu (1978, 1984) provides an analytical framework to explain how people develop different tastes and preferences for sports engagement. Sports participation is part of the culture and a form of leisure. Following his perspective, the individual endowments of economic, cultural, and social capital shape the habitus, which subsequently manifests in various class-based lifestyle choices, such as sports spectatorship. The concept of habitus can be understood as “dispositions” or schemes of acting, thinking and feeling associated with social position. Habitus leads people from a homogeneous social environment to share similar tastes, social preferences and, ultimately, lifestyles, as their resources, strategies and ways of evaluating the world are related. In this way, each social position has its habitus;

that is, the objectivity of the social structure that generates habitus is expressed through the particular subjectivity of the different lifestyles associated with each social class. More specifically, Bourdieu finds that tastes and preferences are crucially determined by people's level of education and by their occupation.

Based on habitus, the spontaneous and free forms of acting are more similar between people in the same social position because their strategies and their expectations are more similar without being deterministic. In particular, Bourdieu (1978) examines both the demand for different sports and the differences between groups of people in acquiring a taste for the sport. Sports choices result from a system of class-based tastes and preferences that are determined by the endowments of capital. Bourdieu also detects class differences in the appreciation of different sports. He finds that privileged classes prefer the most distinctive individual sports, such as golf, horseback riding, skiing, and tennis, along with gymnastics and mountaineering. The middle classes share a similar health culture but in a rather rationalised and ascetic way, i.e., by performing health-oriented sports such as walking and jogging. The middle classes also appreciate team sports such as basketball, handball, and football. Sports serve a different purpose for the working class; their ideal is a strong body, which manifests in the appreciation of individual sports, such as bodybuilding and weightlifting, and violent sports, such as boxing or wrestling (Bourdieu, 1978).

According to this perspective, people do not choose sports in a deterministic way, but neither is the choice a result of people's free will. Indeed, habitus influences individuals' preferences for spectatorship. Therefore, in line with Bourdieu (1978), we may identify a class-based distribution of leisure preferences. People develop different tastes for sports products partly because they come from different social classes. Lifestyles in general and sporting styles in particular are class-based. Bourdieu argues that class attitudes affect which sports are taken up and the cultural status of a specific sport (Grant & Maguire, 1994). Sporting event attendance thus acts as a social marker (Shilling, 1993; Wilson, 2002; Stempel, 2005), or to use Bourdieu's terminology (1984), sports serve as a means of distinction. As Kahma (2010) points out, the connection between occupational class, education, income and sports suggests that occupational and educational differences can be easily detected in the field of sports.

Although Bourdieu's analysis was initially applied to active sports participation, people who are active in the field of sports are also the most active sports spectators (White & Wilson, 1999). In a similar vein, more recently, Warde (2006) provided evidence suggesting that people often tend to watch more sports than they practice them. Thus, spectatorship may represent lifestyle choices more genuinely than practice because it allows people to enjoy sports without the restrictions of one's physical condition. At the same time, attending sporting events is likely to maintain the same "distinctive" function as active sports participation.

Considering this perspective, a first hypothesis can be formulated as follows.

**Hypothesis 1** (segregation hypothesis). Sports spectatorship is class-based. Attending sporting events is a form of cultural consumption that is linked to habitus and class-based preferences. Therefore, this form of sports engagement may only be related to the number of contacts within the same social class, with negligible association with network socio-economic diversity.

### 2.1.1 Sporting events as a source of relational goods

The theory of relational goods provides valuable insights into the type of ties that attending sporting events may favour. Becchetti et al., (2008) define relational goods as the affective/expressive, non-instrumental side of interpersonal relationships. According to these authors, this definition includes aspects such as companionship, emotional support, social approval, solidarity, a sense of belonging, a sense of experiencing one's history and the desire to be loved or recognised by others. Relational goods are based on the need that people have to meet up, and they can be the result of interaction in any domain of social life. These authors argue that relational goods are produced on a smaller scale by family relationships or friendships and, on a larger scale, in many kinds of social events, including live sporting events. These, in fact, are social settings in which repeated contact among different people takes place.

Different mechanisms may explain patterns of interactions and how connections are formed among diverse groups of people in these situations. Boardman & Hargreaves-Heap (1999) propose an argument based on the conversation value of sport. When attending live sporting events (especially key sporting events), spectators not only enjoy these events because of the immediate pleasure that they generate but also because they are a source of debate and discussions that may continue for days after the event. For instance, according to these authors, people use sporting events as conversation starters with strangers. When people engage in conversation, they tend to explore what they have in common. Without easy ways to begin a conversation, many shared views and empathies would not be revealed. Such conversations are plausibly the source of common bonds that draw people together into communities, i.e., bonds that are mutually beneficial in ways other than the mere enjoyment of conversation.

The production of relational goods by attending sporting events helps to explain some positive social outcomes that are discussed in the empirical literature, in particular the ability to provide opportunities for diverse groups and individuals to interact with one another. Some studies have concluded that active sports participation fosters bridging social capital (i.e., Coalter 2008) and helps to develop new friendships and social connectivity across classes (see, for example, Harris 1998). When this logic is applied to sport spectatorship, it makes sense to analyse whether it fosters links between different groups and social networks. Indeed, sporting events may promote social networks (contacts, friendship) and a sense of community (Shulenkorf, Thomson and Schlenker 2015; Zhou & Kaplanidou 2018). In particular, attending a sporting event is an occasion in which the company of others is enjoyed and bonds with friends, relatives, and acquaintances are strengthened. For instance, Holt (1995) argues that spectators often interact by sharing their experiences. Therefore, the shared consumption of leisure experiences can contribute to building and sustaining meaningful ties between individuals, independent of their socioeconomic background.

In the same vein, authors such as Doyle et al., (2016) and Stander & van Zyl (2016), among others, argue that attending sporting events might create different social effects. For example, such attendance nurtures a sense of belonging to the broader community (i.e., by exploring new social relationships while strengthening existing ones and interacting with people who share the same interests). Additionally, developing different interactions with one's favourite teams may produce social identification. Indeed, sports are expected to facilitate the integration of individuals with different cultural or socioeconomic backgrounds by

simplifying interactions through the universal language of sports (Pawlowsky & Schüttoff, 2019).

Our second hypothesis is based on the idea of sporting event attendance as a source of social contacts among people with different backgrounds.

**Hypothesis 2** (integration hypothesis). Attending sporting events implies the sharing of leisure experiences and is a channel through which personal ties are generated and strengthened. Informal contacts that are produced during attendance or when speaking about a sporting event facilitate communication between people with different social backgrounds. Therefore, people who attend sporting events have more extensive and socioeconomically diverse social networks.

### 3 Data and empirical strategy

The survey questionnaire employed in this study was designed by our research team on the basis of previous research and surveys to capture the structural components of personal networks (reference omitted for peer review). Data were collected through the administration of a questionnaire to a representative sample of the Spanish population ( $n=3,000$ ) aged 18 years or older. Fieldwork was conducted under our supervision by a research company with proven expertise in telephone interviews. Multistage sampling was based on the seven Spanish territorial units and the characteristics of habitat, sex and age. A method of randomised telephone contact (CATI - Computer-Assisted Telephone Interviewing) was conducted throughout the national territory.

Due to the socioeconomic classification used for the assessment of social class and social background, which will be discussed in the next subsection, students, people who had never worked and people who could not recall their parents' occupation were excluded from the sample. As a consequence, a total of 320 observations were dropped, 245 of whom (76.56%) were students, and 18 (5.62%) of whom could not recall their parents' occupation. Additionally, 39 out of the 3000 respondents did not declare their frequency of attending sporting events. Therefore, they were also dropped from the sample. Finally, out of the remaining sample, 41 people did not declare their educational level. The actual sample consists of 2600 observations, which represent the Spanish population aged 18 and older who were employed at the time of the interview or who had been formerly employed.

On average, the people included in the sample were 53.93 years old (s.d. 16.525), with a minimum of 18 years and a maximum of 97 years. Approximately 52.58% of the sample were women. Concerning educational level, 17.11% of the sample declared that they had achieved a primary education or no formal education at all, 42.38% declared that they had completed secondary education, and 40.50% declared that they had completed university education. The last education category includes all university programmes, from 3-year technical schools or "diplomas" to PhDs and postgraduate academic degrees. Table 1 presents the variables used in the analysis, along with descriptive statistics.

**Table 1** Variables and descriptive statistics

Variable	Mean (s.d.) or proportion	min	max
<i>Social capital</i>			
Total extension	4.158 (3.188)	0	20
Same class ties	1.643 (1.505)	0	8
Other class ties	2.514 (2.235)	0	13
Salariat ties	1.291(1.381)	0	8
<i>Sports attendance</i>			
once per month	18.3%	0	1
once every three months	8.7%	0	1
once every 6 months	6.4%	0	1
once per year or less/never	66.6%	0	1
<i>Sex</i>			
Female	52.6%	0	1
Male	47.4%	0	1
<i>Age</i>			
	53.9 (16.525)	18	97
<i>Education</i>			
Primary education	17.1%	0	1
Secondary education	42.4%	0	1
University education	40.5%	0	1
<i>Social class</i>			
Salariat	37.1%	0	1
Intermediate Class	28.5%	0	1
Working class	34.4%	0	1
<i>Social class of origin</i>			
Background: salariat	24.0%	0	1
Background: intermediate class	44.5%	0	1
Background: working class	31.4%	0	1

### 3.1 Social classes

The questionnaire was specifically designed to assess individual occupational class and the structure of individual social networks. Regarding class, we adopted the framework of the European Socioeconomic Classification (ESeC); see Rose & Harrison (2007, 2010). This social class schema is based on the Erikson-Goldthorpe-Portocarero model, and it is designed to facilitate cross-nationally comparative research. The ESeC aims to differentiate positions in terms of their typical “employment relations”. This schema comprises a nine-class categorical measure, with recommended reduced versions. Given the characteristics of the instrument used to assess individual social networks, as explained below, we adopted the three-class version of the schema. Additionally, this is the only version that admits a hierarchical interpretation of classes. The highest class or “salariat” includes large employers and higher-grade professional, administrative and managerial occupations, as well as higher-grade technician and supervisory occupations. The intermediate class comprises higher-grade white-collar workers, small employers, those self-employed in non-professional occupations, and higher-grade blue-collar workers. Finally, lower-grade white-collar workers, as well as skilled, semi and unskilled workers, form the working class. Further details on the characteristics of each class can be found in the dedicated resource website

of the Institute for Social and Economic Research (ISER) of the University of Essex, UK (ISER, n.d.).

To operationalise this schema, the survey respondents were asked about their specific occupation (or their previous occupation if they were not working at the time of the interview), their employment relation (e.g., employer, self-employed, employee, or involuntarily excluded from the labour market), the size of their firm or the firm where they work (to distinguish between large and small firms, using the threshold of 10 or more employees for large firms), and whether they had any supervising role. Occupational data were used to assess the respondents' social class, as well as their social background, i.e., the social class of their reference person during childhood (i.e., their father for 98.46% of the sample). As presented in Tables 1 and 34.38% of the respondents were categorised as working class, 28.46% as were categorised as intermediate class, and the rest belonged to the highest class or "salarial". Individual social classes have been used to assess network diversity, namely, by comparing the social class of each person with that of their social ties, as obtained by the position generator.

### 3.2 The position generator and the structure of social networks

To assess the characteristics of the personal social network, we used a class-based position generator designed to obtain information about interactions with strong ties (family and friends, separately). Lin & Dumin (1986) developed the "position-generator" method to study the ability to access structurally embedded resources (Lin & Erickson, 2008). In practice, the position generator requires respondents to indicate if they are in contact (through family relations, friendships or as an acquaintance) with a sample of occupation-based positions. The position generator has been widely used to assess social capital outcomes, from labour market achievements to income and social class (Lin & Dumin, 1986; Lin, 2001; Lin & Erickson, 2008; Pena-López y Sánchez-Santos 2017). In general, this instrument has been shown to be useful in the study of social mobility. Here, however, we use the position generator to study a determinant of the structure of social networks, namely, attending sporting events. This use has been inspired by Tindall et al., (2012), who apply a position generator to the production of social capital within the field of social movements. In particular, they regard network structure as an outcome of activism, and in their specific setting, they find that social capital is one outcome of social movement mobilisation. To that end, they developed a position generator adapted from Erikson (1996), which is focused on class locations in line with the work of Wright (Wright, 1985). The current work is based on those versions of the position generator.

Our measure includes 12 occupations, which were selected bearing in mind occupational classes. In particular, they consider different class locations, gender profiles, and frequencies in Spanish society. The position generator used in the present study thus includes four occupations from the highest class or salariat (owner of a large firm, university professor, journalist and architect), four intermediate positions (office clerk without supervisory role, department store manager, owner of a small firm, self-employed taxi driver) and four working-class occupations (elderly caretaker, cashier, builder and cleaning staff). The respondents were asked whether they knew any relatives or friends (separately) in those occupations. A total of 61.92% of the sample declared to have at least one contact from the salariat class among their strong ties. This figure increased to 73.54% for intermediate



class ties and then decreased to 55.15% when the respondents were asked about interactions with the working class. The social class of one's personal contacts is clearly associated with one's own social class. For example, while 79.30% of people classified as "salarial" have at least one person from the same class in their network, this figure drops to 61.89% for the intermediate class and to a minimum of 47.65% for the working class. As discussed in the previous sections, network diversity and, particularly, access to the most valued social positions may be a gateway to many positive outcomes. The structure of social networks by class highlights the existence of closure mechanisms that are detrimental to the lowest strata of society.

From the position generator, we derived three measures of the network structure. "Salarial ties" is the sum of social ties that belong to the highest class and ranges from 0 to 8. The upper bound results from the sum of a maximum of four salariat family members plus a maximum of four salariat friends. "Same class ties", which also range from 0 to 8, is the sum of social ties from the same class of the respondent. "Other class ties" is the sum of contacts from a class that is different from that of the respondents and ranges from 0 to 16; this variable attempts to measure network diversity in terms of social classes. Finally, "total extension" is the sum of all reported social ties, which varies from 0 to 24 (12 family ties plus 12 friends).

### 3.3 Attending sporting events and other independent variables

Attending sporting events is measured by the frequency of attendance that the respondents declared. In particular, the telephone interview included the question (in Spanish) "How often do you attend sporting events?". Admitted responses include "at least one per month", "at least once every three months", "at least once every six months", and "once per year or less/never". Summary statistics are presented in Table 1. A total of 66.62% of respondents reported never or rarely attended a sporting event. Despite a large number of non-participants, the distribution is U-shaped; i.e., either the respondents have never attended or they attend at least once per month.

The other control variables are sociodemographic, as shown in Table 1. They include sex, age, level of education, and social background (occupational class of the father). These variables were selected because they usually show a high correlation with measures of social capital (Warde et al. 2003; Modood 2004; Li and Marsh 2008).

### 3.4 Data analysis

The characteristics of the dependent variables motivated the choice of Poisson regressions. Additionally, we have observed that the distribution of the number of social ties of each respondent presents a large number of zeros. That is, many people declared not knowing any person with an occupation listed in the position generator. Zero-inflated Poisson (ZIP) regressions have been previously used to model overdispersed count data with an excess of zero counts (Mullahy, 1986; Heilbron, 1989; Lambert, 1992). For example, Downward et al., (2011) applied the ZIP approach to modelling sports participation. These authors, when discussing sports participation data, observe that the data recording non-participation usually combine the categories of "never" and "not recently". That is, questions are conditional on sports participation over a recent past period (Downward et al., 2009), and this circum-

stance implies a large number of “non-participation” driven by different behaviours. The same logic applies when reporting the number of social ties. The ZIP model assumes that a separate process generates excess zeros and therefore that excess zeros can be modeled separately. In other words, in zero-inflated models, it is assumed that there are two groups. Taking as an example the issue under study, the first group comprises individuals with a probability of 1 regarding having zero social ties, while in the second group, there are individuals who may have no social relations but who also have a nonzero probability of having a positive count of social ties. The first group may include socially isolated people or elderly individuals who, apart from having more difficulties establishing social relations, may not declare some contact due to the period considered in their responses. Additionally, isolation may be more likely within the lowest strata of society. Therefore, taking into account these theoretical considerations, we decided to adopt the ZIP regression approach. The empirical evidence also supports this choice. We have compared different options for modelling count data, namely, Poisson regression, negative binomial, zero-inflated Poisson and zero-inflated negative binomial, by means of Akaike’s and Schwarz’s Bayesian information criteria.<sup>1</sup> Zero-inflated models are always preferred to explain the number of contacts of the same class, those of other classes, or those belonging to the salariat. In terms of the results, the differences are negligible, both qualitatively and quantitatively. However, the chosen approach is more consistent with the underlying mechanism under study.

The estimation of a ZIP regression model involves, first, predicting membership in the two latent groups (by a logit regression); second, estimating the number of counts for people in the second group; and third, computing the observed probabilities taking into account the two groups (Long & Freese, 2001). This was the approach adopted in the present study.

## 4 Results

We begin by describing the measures of social capital and sports attendance by social class of our respondents (see Table 2). First, the working class has less extensive personal networks ( $M=3.568$ ,  $SD=0.101$ ) compared to the rest of the sample ( $M=4.466$ ,  $SD=0.078$ ),  $t(2598)=6.885$ ,  $p=0.000$ . Second, the salariat presents more heterogeneous networks ( $M=2.757$ ,  $SD=0.029$ ) compared to the other social classes ( $M=2.371$ ,  $SD=0.054$ ),  $t(2598)=4.2691$ ,  $p=0.000$ . In contrast, the working class appears to be more closed. In particular, they have reduced access to the salariat ( $M=0.843$ ,  $SD=0.038$ ) compared to the rest ( $M=1.526$ ,  $SD=0.035$ ),  $t(2598)=12.320$ ,  $p=0.000$ . Regarding attendance at sporting events, the percentage of respondents who never or rarely attended sporting events was equal to 63.56% for the highest class, 63.24% for the intermediate class, and 72.71% for the working class. At the opposite end of the distribution, the percentage of respondents who attended sporting events with the highest frequency was 20.60% for the salariat class, 19.73% for the intermediate class, and 14.54% for the working class.

On the one hand, these descriptive statistics highlight the lack of class heterogeneity of personal networks of the working class. On the other hand, they show that a relevant proportion of the upper classes attend sporting events; therefore, attendance may favour social mixing. The rest of the analysis delves into these questions.

<sup>1</sup> Comparison of the count models has been realised by using Long & Freese’s *countfit* command in Stata. The results are available upon request.

**Table 2** Social capital and sports attendance by class of respondents

	Salariat	Intermediate class	Working class
<b>Number of observation (%)</b>	966 (37.1%)	740 (28.5%)	894 (34.4%)
<i>Social capital</i>			
<b>Total extension</b>	4.470	4.462	3.568
<b>Same class ties</b>	1.713	1.909	1.348
<b>Other class ties</b>	2.757	2.553	2.220
<b>Salariat ties</b>		1.282	0.843
<i>Sports attendance</i>			
<b>once per month</b>	20.6	19.73	14.54
<b>once every three months</b>	8.7	9.73	7.83
<b>once every 6 months</b>	7.14	7.3	4.92
<b>once per year or less</b>	63.56	63.24	72.71

Table 3 presents the results of the estimation of the zero-inflated Poisson models for different dependent variables used to assess the structure of social networks. Overall, attending sporting events is associated with more extensive social networks, and the size of the effect slightly increases with frequency. Compared to those attending once per year or less, those who attend once every six months have 1.18 times as many social ties, and the rate ratio is similar when the frequency of attendance is once per month (1.19).<sup>2</sup> Thus, regarding the size of the effect, attending sporting events once every three months is not significantly different from attending sporting events once per month or more. This result points to the importance of frequent interactions for the accumulation of social ties.

The control variables have the expected signs. Total network extension is positively associated with being male, being older, having a higher level of education, and having a high-class background. Concerning the “inflated model”, that is, the process that explains excess zeroes in the dependent variable, we find that the probability of not declaring any social ties increases with the number of years (*Age*). Also, compared to people belonging to the higher class (the salariat), the working class are more likely to report no social connections.

Models (ii) to (iv) in Table 3 provide useful insights into the association of sports participation with the structure of networks. First (see model (ii)), attending sporting events is associated with a larger number of social ties within the same occupational class. The maximum effect is achieved for the highest frequency, i.e., those who attend once per month or more have 1.20 as many social ties within the same class as those who attend once per year or less. It should be noted, however, that the statistical significance increases with frequency. If a low frequency of attending sporting events is associated with having more extensive social networks, the relation only holds for same-class social ties. In fact, in terms of improved network diversity, that is, regarding contacts with other occupational classes (see model (iii) in Table 3), attending once every six months is not different from attending once per year or less. However, the association with network diversity is positive for higher frequencies. For example, if a person were to increase their frequency of attending sporting events from once per year or less to once every three months, the difference in the logs of the expected counts would be expected to increase by 0.2, while holding the other variables

<sup>2</sup> Tables 3 and 4 report the coefficients (*b*) of the zero-inflated Poisson regressions, and the results are interpreted in terms of rate ratios,  $exp(b)$ .

**Table 3** Determinants of network extension and diversity (complete sample)

	(i)		(ii)		(iii)		(iv)	
Poisson regression model	Total extension		Same class ties		Other class ties		Salarial ties	
<i>Sports attendance</i>								
once every 6 months	0.113	*	0.159	*	0.084		0.105	
once every three months	0.170	***	0.154	**	0.190	***	0.112	
once per month	0.177	***	0.187	***	0.154	***	0.168	***
<i>Control variables</i>								
Female	-0.073	**	-0.033		-0.077	*	-0.104	**
Age	0.031	***	0.027	***	0.030	***	0.040	***
Age <sup>2</sup>	-0.001	***	-0.001	***	-0.001	***	-0.001	***
Secondary education	0.199	***	0.186	**	0.242	***	0.499	***
University education	0.234	***	0.211	**	0.253	***	0.800	***
Background: intermediate class	0.015		-0.069		0.097	*	-0.156	***
Background: working class	-0.099	**	-0.174	***	-0.029		-0.377	***
constant	0.830	***	0.059		0.271		-0.981	***
<i>Inflate model (logit)</i>								
Age	0.031	***	0.031	***	0.035	***	0.025	***
Intermediate	0.164		-0.513		0.293		0.789	***
Working class	0.742	***	0.965	***	0.627	***	1.459	***
constant	-4.406	***	-3.753	***	-4.046	***	-3.775	***
Number of obs.	2600		2600		2600		2600	
Zero obs.	300		749		550		990	
Wald chi <sup>2</sup> (p-value)	0.0000		0.0000		0.0000		0.0000	

Note. \*significant at 95% level; \*\*significant at 99% level; \*\*\*significant at 99.9%

constant. Therefore, our data are compatible with the hypothesis of a positive association between attending sporting events at a high frequency and network diversity.

The last model presented in Table 3 (see model (iv) in Table 3) considers a different but relevant dimension of social capital. Many positive outcomes of social capital are linked to access to people who are better located in society. Our results suggest that access to the salariat mainly depends on one's educational level and social background. Compared to people with a primary education, those who reported completing a university degree have 2.22 times as many high-class social ties. Additionally, a middle- or working-class origin reduces the logs of expected high-class friends. However, attending sporting events partly compensates for these effects. Compared to the "never or almost-never" attendants, people who attend at least once per month have 1.18 times as many high-class ties. In addition, we can reject the existence of an association for lower frequencies of attending sporting events. In other words, this form of participation is associated with a larger salariat network only when the frequency is sufficiently high.

In light of these results, our data seem to be incompatible with the "segregation hypothesis". Independent of occupational class, people who attend sporting events are more likely to establish contact with others with different backgrounds and positions. Therefore, we find that this form of sports participation is associated with social capital extension and diversity. Furthermore, we find a positive effect of frequency, which is in line with the empirical literature discussed above.

Table 4 presents the results of the estimations of the same models as those shown in Table 3, but with the sample restricted to the working class. This restricted sample permits

**Table 4** Determinants of network extension and diversity (working-class only)

	(i)	(ii)	(iii)	(iv)
Poisson regression model	Total extension	Same class ties	Other class ties	Salariat ties
<i>Sports attendance</i>				
once every 6 months	0.107	0.267	0.001	0.093
once every three months	0.147 *	0.297 *	0.135	0.148
once per month	0.303 ***	0.356 ***	0.270 ***	0.392 ***
<i>Control variables</i>				
Female	0.017	0.120	-0.019	0.054
Age	0.037 ***	0.036 ***	0.039 ***	0.027 *
Age <sup>2</sup>	-0.001 ***	-0.001 ***	-0.001 ***	-0.001
Secondary education	0.237 ***	0.055	0.392 ***	0.874 ***
University education	0.392 ***	0.034	0.619 ***	1.224 ***
Background: intermediate class	0.020	0.053	0.043	-0.078
Background: working class	-0.070	0.119	-0.185 *	-0.327 **
constant	0.467 *		-0.199	-1.375 ***
<i>Inflate model (logit)</i>				
Age	0.026 ***	0.024 **	0.020 **	0.013
constant	-3.385 ***	-2.611 ***	-2.773 ***	-1.964 ***
Number of obs.	894	894	894	894
Zero obs.	146	347	242	468
Wald chi <sup>2</sup> (p-value)	0.0000	0.0000	0.0000	0.0000

Note. \*significant at 95% level; \*\*significant at 99% level; \*\*\*significant at 99.9%

us to discuss whether the positive effects of attendance are meaningful for this social class. Overall, we find a positive association of attendance with network extension and diversity for the working class. Additionally, the existence of an association can be rejected for lower frequencies of attendance. In other words, attending sporting events once every three months or less appears to be irrelevant for the purpose under study. Compared to attending once per year or less, people who attend sporting events at least once per month have 1.35 times as many social ties, 1.43 times as many same-class ties, 1.31 times as many other-class ties, and 1.48 times as many high-class ties. Concerning network diversity (contact with people from other classes) and connections to the highest class, this effect fully compensates for the negative consequences of a working-class origin. Therefore, our results are compatible with a positive association of attending sporting events with the structure of social networks for the working class.

## 5 Discussion

The findings of our analysis attest to the stratification of social relations in Spanish society. Compared to other social classes, the working class has a lower number of connections, mainly from the same social stratum. Additionally, the positive relationship between education, occupation, and the extension of personal networks supports the idea that the more educated upper classes, who have access to high-status professions, tend to enjoy more extensive and valuable networks. Our results support the existence of homophilic networks of high-status individuals. This result is in line with the existing literature, which shows that

the position in the social structure affects personal networks by homophily (Völker & Flap, 1999; Lin, 2001; McPherson et al., 2001; Blossfeld, 2009), by its effect on the returns to investments in education and social capital (Rungo & Pena-López, 2019), and by habitus (Bourdieu, 1984; Law & Mooney, 2006; Pena-López et al., 2021). These mechanisms imply that members of the upper classes have a greater endowment of accessible networks. In contrast, the lower strata of society have less extensive and more informal networks (Lin, 2001, 2000).

The stratification of social connections implies that part of society enjoys lower life opportunities. Therefore, any improvement in terms of social capital may generate a positive impact. Our focus on attendance at sporting events is aimed precisely at this issue: the social impact of sports is directly related to its capacity to improve the network social capital of the less privileged in terms of both extension and diversity. In a society where all social strata share an interest in sports, sporting events may provide a favourable setting for social mixing and enhance life opportunities for the working class. Our data is compatible with this claim. Sports have the power to overcome the barriers of social stratification.

The positive association between attendance at sporting events and social networks' extension and diversity can be viewed in light of social capital theory and the vast body of research on sport and social capital. For example, regarding the importance of frequent interactions for the formation of social connections, our evidence is in line with Lera-López, Ollo-López and Sánchez-Santos (2020). These authors show that attending events or talking with other people about sports positively impacts individual subjective well-being. More specifically, these authors conclude that the production of relational goods helps to explain the impact of sport spectatorship on self-reported individual happiness. Our results corroborate the role of sporting event attendance as a source of relational goods. In fact, this kind of interaction boosts network diversity and class heterogeneity.

The empirical evidence in favour of a positive association between attending sports events and social network diversity also has some relevant implications. Some authors, such as Putnam (2000), argue that not all forms of social capital have positive effects. Putnam distinguishes between a social capital of strong ties (bonding social capital), related to the intimate social circle of individuals with similar socioeconomic characteristics, and a social capital of weak ties (bridging social capital), which includes members of other social groups. The social impact of sports largely depends on the type of network social capital created within and through sports. In particular, bridging social capital is more likely to contribute to the development of inclusive social networks, which can be beneficial for both individuals and communities. Therefore, our findings question the view according to which sport attendance generates bonding social capital and can even act as a social segregation factor.

These results might be related to the increasing blurriness of the frontiers between class preferences for sports. As authors such as Chan & Goldthorpe (2007) argue, theories based on a Bourdieusian approach, which support the idea that tastes in cultural consumption are class-based, can be a compelling paradigm for explaining patterns in the past, but they may not be valid to explain present behaviours. The influence of class on individuals' cultural choices has become considerably weaker, possibly because of the increased standards of living and mobility in modern societies (Beck, 1992; Bauman, 2002; Atkinson, 2010; Goldthorpe, 2010; Gerhards et al., 2013). Our results, although insufficient to appropriately analyse this issue, are compatible with this approach.

Our conclusions are especially interesting for societies where a sizeable proportion of the population devotes their leisure time to attending sporting events. In Spain, 81% of the population attends or access sports events through audio-visual media. Additionally, 37.1% of Spaniards attend live sports events, and 24.9% attend football matches (Encuesta de Hábitos Deportivos 2015). This context favours the kind of social mixing discussed in this study. However, it also implies that the generalisation of our findings may depend on the type and frequency of sport participation in each society. Further research is needed to evaluate whether the social impact of sports discussed here is also relevant in different contexts.

## 6 Conclusions

As with any cultural or social gathering, attending sporting events allows one to meet other people and enlarges one's social network. Additionally, sports have a "conversation value", which may further enhance the social interaction distance from the physical place of attendance. Our results show that attending sporting events is associated with having a more extensive social network. Moreover, the number of social contacts increases with the frequency of attendance. This result points to the importance of frequent interactions that emerge around sports participation for the accumulation of social ties.

The improved extension of social networks, however, may not be associated with the socioeconomic diversity of these new social ties. Sports may have symbolic power and function as a means for social distinction. As a stream of the literature on the sociology of sports has largely discussed, the practice of and participation in different sports may be tied to social class, at least in a specific society or context. When this is the case, we would still expect a "social capital effect" of attending sporting events in terms of enlarged social networks. However, new social contacts should share similar social backgrounds or positions. Our data point in a different direction. In particular, we have shown that a high frequency of attendance is associated with more socioeconomically diverse networks. Indeed, for the working class, such attendance boosts the number of high-class social ties. This result means that attending sporting events can act as a driver of bridging social capital. This finding is important because bridging social capital adds significantly to the creation of collective social capital that is shared by a community and improves the community's level of social interconnectedness (Clopton & Finch, 2011). As discussed in the Introduction, improved social capital may have significant consequences in terms of life opportunities. Therefore, our results are compatible with our "integration hypothesis" of sports participation, that is, the value of sports as a channel through which diverse personal ties are generated and strengthened. The shared consumption of leisure experiences produces relational goods, and it contributes to building meaningful ties between individuals who, along other dimensions, are likely to be different from each other.

We have reached these conclusions by employing a specific class schema and a limited instrument to measure the structure of network social capital. First, other classifications may produce different results, but our survey was designed to employ a specific definition of social class. Second, our classification only takes into account three social classes. This reduced version of the European Socioeconomic Classification framework is the only one that admits a hierarchical interpretation. It is appropriate to our ends, but a more nuanced classification may reveal subtle differences in how people with different backgrounds form

social ties. However, we cannot analyse the class structure of social networks in detail due to the limitations of our position generator. In particular, the position generator only considers 12 social positions, 4 for each class. Considering a larger number of occupations would undoubtedly improve the analysis of social connections.

Our results do not necessarily imply the lack of a connection between sports and social class or position. Several studies have pointed to the existence of some sports that are preferred by most people in the highest strata of society (see, for example, Veenstra (2010), Stempel (2010) or Rivera (2016), among others). These findings are roughly in line with Bourdieu's results for France in 1975. Unfortunately, our data do not permit us to distinguish between different sports. Therefore, the general link between sports spectatorship and the size and composition of social networks that we have brought to light may mask significant associations for specific sports or types of sporting events. In any case, our findings do imply that there are at least some sporting events that attract people with different socioeconomic statuses and that there is an association between the frequency of attendance and social mixing.

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